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## SEQUENCE LISTING

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<110> AMGEN INC.  
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Shen, Wenyan  
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Morris, Arvia E. ( Allen, Martin J.

<120> Monkey Immunoglobulin Sequences

<130> A-951 (WO)

<140> --to be assigned

<141> 2004-11-04

<150> US 60/517,970

<151> 2003-11-07

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<170> PatentIn version 3.2

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Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr  
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Arg Val Glu Ile Lys Thr Cys Gly Gly Gly Ser Lys Pro Pro Thr Cys  
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Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu  
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195 200 205

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Pro Glu Asn Thr Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly  
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Ser Tyr Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln  
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Gly Val His Thr Phe Gln Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
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Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr  
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Tyr Val Cys Asn Val Val His Glu Pro Ser Asn Thr Lys Val Asp Lys  
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 Thr Val Gly Leu Pro Cys Arg Ser Thr Cys Pro Pro Cys Pro Ala Glu  
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 Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Thr His Gln Asp Trp  
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&lt;211&gt; 325

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&lt;213&gt; Macaca fascicularis

&lt;400&gt; 6

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Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
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Tyr Val Cys Asn Val Val His Glu Pro Ser Asn Thr Lys Val Asp Lys  
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Arg Val Glu Phe Thr Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Leu  
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Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr  
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Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val  
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Glu Val His His Ala Gln Thr Lys Pro Arg Glu Arg Gln Phe Asn Ser  
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Thr Tyr Arg Val Val Ser Val Leu Thr Val Thr His Gln Asp Trp Leu  
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Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Thr Tyr Lys Thr Thr  
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Pro Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Leu Tyr Ser Lys Leu  
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Ile Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Thr Phe Ser Cys Ser  
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Gly Val His Thr Phe Gln Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
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Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr  
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Tyr Val Cys Asn Val Val His Glu Pro Ser Asn Thr Lys Val Asp Lys  
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Arg Val Glu Phe Thr Pro Pro Cys Pro Pro Cys Pro Ala Pro Glu Leu  
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Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr  
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Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val  
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Val Ser Leu Thr Cys Leu Val Thr Gly Phe Tyr Pro Ser Asp Ile Ala  
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Pro Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Leu Tyr Ser Lys Leu  
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ccagaaaacc atctccaaag acaaagggca gccccgagag cctcaggtgt acaccctgcc 720  
 cccgtcccgg gaggagctga ccaagaacca ggtcagcctg acctgcctgg tcaaaggctt 780  
 ctaccccagc gacatcgctg tggagtggga gaggcagggg cagccggaga acacctacaa 840  
 gaccacgccg cccgtgctgg actccgacgg ctctacttc ctctacagca agctcaccgt 900  
 ggacaagagc aggtggcagc aggggaacgt cttctcatgc tccgtgatgc atgaggctct 960  
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<210> 12  
 <211> 335  
 <212> PRT  
 <213> Macaca fascicularis

<400> 12

Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Val Ser  
 1 5 10 15

Cys Ser Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val  
 20 25 30

Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala  
 35 40 45

Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly  
 50 55 60

Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly  
 65 70 75 80

Thr Gln Thr Tyr Val Cys Asn Val Val His Glu Pro Ser Asn Thr Lys  
 85 90 95

Val Asp Lys Arg Val Glu Phe Thr Arg Pro Cys Asp Asp Thr Thr Pro  
 100 105 110

Pro Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val  
 115 120 125

Phe Val Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr  
 130 135 140

Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu  
 145 150 155 160

Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Gln  
 165 170 175

Thr Lys Pro Arg Glu Arg Gln Phe Asn Ser Thr Tyr Arg Val Val Ser  
 180 185 190

Val Leu Thr Val Thr His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Thr  
 195 200 205

Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Gln Lys Thr Ile  
 210 215 220

Ser Lys Asp Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro  
 225 230 235 240

Pro Ser Arg Glu Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu  
 245 250 255

Val Lys Gly Phe Tyr Pro Ser Asp Ile Val Val Glu Trp Glu Ser Ser  
 260 265 270

Gly Gln Pro Glu Asn Thr Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser  
 275 280 285

Asp Gly Ser Tyr Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg  
 290 295 300

Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu  
 305 310 315 320

His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
 325 330 335

<210> 13

<211> 1015

<212> DNA

<213> *Macaca fascicularis*

<400> 13

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gtgtcgtgga actcaggcgc cctgaccagc ggcgtgcaca ccttcccggc tgtcctacag	180
tcctcagggc tctactccct cagcagcgtg gtgaccgtgc cctccagcag cttgggcacc	240
cagacctacg tctgcaacgt cgttcatgag cccagcaaca ccaaggtgga caagagagtt	300
gagttcacac gcccatgtga tgacacaact cccccatgcc caccgtgccc agcacctgaa	360

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ctcctggggg gaccgtcagt cttcgtcttc cccccaaaac ccaaggacac cctcatgac 420
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cagttcaact ggtacgtgga cggcgcggag gtgcatcatg ccagacgaa gccacgggag 540
acgcagtaca acagcacata tcgtgtggtc agcgtcctca ccgtcacgca ccaggactgg 600
ctgaacggca aggagtacac gtgcaaggtc tccaacaaag cctccccggc ccccatccag 660
aaaaccatct ccaaagacaa agggcagccc cgagagcctc aggtgtacac cctgcccccg 720
tcccggggagg agctgaccaa gaaccaggtc agcctgacct gcctgggtcaa aggcttctac 780
cccagcgaca tcgtcgtgga gtgggagagc agcgggcagc cggagaacac ctacaagacc 840
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aagagcaggt ggcagcaggg gaacgtcttc tcatgctccg tgatgcatga ggctctgcac 960
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<210> 14  
 <211> 333  
 <212> PRT  
 <213> *Macaca fascicularis*

<400> 14

Arg Leu Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Val Ser Cys Ser  
1 5 10 15

Arg Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp  
20 25 30

Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr  
35 40 45

Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr  
50 55 60

Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln  
65 70 75 80

Thr Tyr Val Cys Asn Val Val His Glu Pro Ser Asn Thr Lys Val Asp  
85 90 95

Lys Arg Val Glu Phe Thr Arg Pro Cys Asp Asp Thr Thr Pro Pro Cys  
100 105 110

Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Val  
115 120 125



Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu  
 130 135 140  
 Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln  
 145 150 155 160  
 Phe Asn Trp Tyr Val Asp Gly Ala Glu Val His His Ala Gln Thr Lys  
 165 170 175  
 Pro Arg Glu Thr Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu  
 180 185 190  
 Thr Val Thr His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Thr Cys Lys  
 195 200 205  
 Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Gln Lys Thr Ile Ser Lys  
 210 215 220  
 Asp Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser  
 225 230 235 240  
 Arg Glu Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys  
 245 250 255  
 Gly Phe Tyr Pro Ser Asp Ile Val Val Glu Trp Glu Ser Ser Gly Gln  
 260 265 270  
 Pro Glu Asn Thr Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly  
 275 280 285  
 Ser Tyr Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln  
 290 295 300  
 Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn  
 305 310 315 320  
 His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
 325 330

<210> 15  
 <211> 1584  
 <212> DNA  
 <213> *Macaca fascicularis*

<400> 15  
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60

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tggaactcag gcgccctgac cagcggcgtg cacaccttcc aggctgtcct acagtcctca 180
gggctctact ccctcagcag cgtgggtgacc gtgccctcca gcagcttggg cactcagacc 240
tacgtctgca acgtcgttca tgagcccagc aacaccaagg tggacaagac agttgggtgag 300
aggccagcga ggggaaggggg gtgtctgctg gaagccaggc tcggccctcc tgccctggaca 360
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cagaggcctc tgcccacccc actcatgctc agggagccag tcttctggct ttttccacca 480
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ctctccgtgt ctccgggtaa atga 1584

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<210> 16  
<211> 326  
<212> PRT  
<213> *Macaca fascicularis*

<400> 16

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Ser Cys Ser Arg  
1 5 10 15

Ser Thr Ser Gln Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr  
20 25 30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser  
35 40 45

Gly Val His Thr Phe Gln Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr  
65 70 75 80

Tyr Val Cys Asn Val Val His Glu Pro Ser Asn Thr Lys Val Asp Lys  
85 90 95

Thr Val Gly Leu Pro Cys Arg Ser Thr Cys Pro Pro Cys Pro Ala Glu  
100 105 110

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp  
115 120 125

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp  
130 135 140

Val Ser Gln Glu Glu Pro Asp Val Lys Phe Asn Trp Tyr Val Asp Gly  
145 150 155 160

Val Glu Val His Asn Ala Gln Thr Lys Pro Arg Glu Glu Gln Phe Asn  
165 170 175

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Thr His Gln Asp Trp  
180 185 190

Leu Asn Gly Lys Glu Tyr Thr Cys Lys Val Ser Asn Lys Ala Leu Pro  
195 200 205

Ala Pro Lys Gln Lys Thr Val Ser Lys Thr Lys Gly Gln Pro Arg Glu  
210 215 220

Pro Gln Val Tyr Thr Leu Pro Pro Pro Arg Glu Glu Leu Thr Lys Asn  
225 230 235 240

Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile  
 245 250 255

Val Val Glu Trp Glu Ser Ser Gly Gln Pro Glu Asn Thr Tyr Lys Thr  
 260 265 270

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Leu Tyr Ser Lys  
 275 280 285

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Thr Phe Ser Cys  
 290 295 300

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu  
 305 310 315 320

Ser Val Ser Pro Gly Lys  
 325

<210> 17  
 <211> 1584  
 <212> DNA  
 <213> *Macaca fascicularis*

<400> 17  
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 tggaactcag gcgccctgac cagcggcgtg cacaccttcc aggctgtcct acagtctctca 180  
 gggctctact ccctcagcag cgtgggtgacc gtgccctcca gcagcttggg caccagacc 240  
 tacgtctgca acgtcgttca tgagcccagc aacaccaagg tggacaagag agttgggtgag 300  
 aggccagcga gggaaggggg gtgtctgctg gaagccaggc tcggccctcc tgctgggaca 360  
 aactctggct gtgcagcccc agcccagggc agcagggcag gccccgtctg tctctcacc 420  
 cagaggcctc tgcccacccc actcatgctc agggagccag tcttctgggt tttccacca 480  
 ggctctgagc aggcacaggc tggatgcccc taccacaggc cctgcacaca caggggcagg 540  
 tgctgggctc agacctgcca agagccatat ctgggaggac cctgccctga cctaagccca 600  
 ccccaaaggc caaactccac tccctcagct cagacacctt ctctcctccc acatcccagt 660  
 aactcccaat cttctctctg cagggctccc atgtcgttcc acgtgccac cgtgccagg 720  
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tcaagttcaa ctggtacgtg gacggcgtgg aggtgcacaa tgcccagacg aagccacggg 1020  
 aggagcagtt caacagcacg tacgcgctgg tcagcgtcct caccgtcaca caccaggact 1080  
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 ggccggctca gccaccctc tgccctggga gtgaccgctg tgccaacctc tgtccctaca 1260  
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 aaccagggtca gcctgacctg cctgggtcaaa ggcttctacc ccagcgacat cgtcgtggag 1380  
 tgggcgagca acgggcagcc ggagaacacc tacaagacca ccccgcccggt gctggactcc 1440  
 gacggctcct acttcctcta cagcaagctc accgtggaca agagcaggtg gcagcagggg 1500  
 aacaccttct catgctccgt gatgcatgag gctctgcaca accactacac ccagaagagc 1560  
 ctctccgtgt ctccgggtaa atga 1584

<210> 18  
 <211> 326  
 <212> PRT  
 <213> Macaca fascicularis

<400> 18

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Ser Cys Ser Arg  
 1 5 10 15

Ser Thr Ser Gln Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr  
 20 25 30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser  
 35 40 45

Gly Val His Thr Phe Gln Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
 50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr  
 65 70 75 80

Tyr Val Cys Asn Val Val His Glu Pro Ser Asn Thr Lys Val Asp Lys  
 85 90 95

Arg Val Gly Leu Pro Cys Arg Ser Thr Cys Pro Pro Cys Pro Ala Glu  
 100 105 110

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp  
 115 120 125

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp  
 130 135 140  
 Val Ser Gln Glu Glu Pro Asp Val Lys Phe Asn Trp Tyr Val Asp Gly  
 145 150 155 160  
 Val Glu Val His Asn Ala Gln Thr Lys Pro Arg Glu Glu Gln Phe Asn  
 165 170 175  
 Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Thr His Gln Asp Trp  
 180 185 190  
 Leu Asn Gly Lys Glu Tyr Thr Cys Lys Val Ser Asn Lys Ala Leu Pro  
 195 200 205  
 Ala Pro Lys Gln Lys Thr Val Ser Lys Thr Lys Gly Gln Pro Arg Glu  
 210 215 220  
 Pro Gln Val Tyr Thr Leu Pro Pro Pro Arg Glu Glu Leu Thr Lys Asn  
 225 230 235 240  
 Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile  
 245 250 255  
 Val Val Glu Trp Ala Ser Asn Gly Gln Pro Glu Asn Thr Tyr Lys Thr  
 260 265 270  
 Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Leu Tyr Ser Lys  
 275 280 285  
 Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Thr Phe Ser Cys  
 290 295 300  
 Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu  
 305 310 315 320  
 Ser Val Ser Pro Gly Lys  
 325

<210> 19  
 <211> 978  
 <212> DNA  
 <213> Macaca fascicularis

<400> 19  
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ttctcatgct ccgtgatgca tgaggctctg cacaaccact acaccagaa ggcctctcc 960
ctgtctccgg gtaaatga 978

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<210> 20  
 <211> 325  
 <212> PRT  
 <213> *Macaca fascicularis*

<400> 20

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Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Ser Cys Ser Arg Ser
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Thr Ser Gln Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe
          20           25           30

```

```

Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly
          35           40           45

```

```

Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu
          50           55           60

```

```

Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr
65           70           75           80

```

Val Cys Asn Val Val His Glu Pro Ser Asn Thr Lys Val Asp Lys Thr  
 85 90 95  
 Val Gly Leu Pro Cys Arg Ser Thr Cys Pro Pro Cys Pro Ala Glu Leu  
 100 105 110  
 Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr  
 115 120 125  
 Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val  
 130 135 140  
 Ser Gln Glu Glu Pro Asp Val Lys Phe Asn Trp Tyr Val Asp Gly Val  
 145 150 155 160  
 Glu Val His Asn Ala Gln Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser  
 165 170 175  
 Thr Tyr Arg Val Val Ser Val Leu Thr Val Thr His Gln Asp Trp Leu  
 180 185 190  
 Asn Gly Lys Glu Tyr Thr Cys Lys Val Ser Asn Lys Ala Leu Pro Ala  
 195 200 205  
 Pro Arg Gln Lys Thr Val Ser Lys Thr Lys Gly Gln Pro Arg Glu Pro  
 210 215 220  
 Gln Val Tyr Thr Leu Pro Pro Pro Arg Glu Glu Leu Thr Lys Asn Gln  
 225 230 235 240  
 Val Ser Leu Thr Cys Leu Ile Lys Gly Phe Tyr Pro Ser Asp Ile Val  
 245 250 255  
 Val Glu Trp Ala Ser Asn Gly Gln Pro Glu Asn Thr Tyr Lys Thr Thr  
 260 265 270  
 Pro Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Leu Tyr Ser Lys Leu  
 275 280 285  
 Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Thr Phe Ser Cys Ser  
 290 295 300  
 Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser  
 305 310 315 320



Leu Ser Pro Gly Lys  
325

<210> 21  
<211> 1584  
<212> DNA  
<213> *Macaca fascicularis*

<400> 21  
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ctctccgtgt ctccgggtaa atga

1584

&lt;210&gt; 22

&lt;211&gt; 326

&lt;212&gt; PRT

<213> *Macaca fascicularis*

&lt;400&gt; 22

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Ser Cys Ser Arg  
 1 5 10 15

Ser Thr Ser Gln Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr  
 20 25 30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser  
 35 40 45

Gly Val His Thr Phe Gln Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
 50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr  
 65 70 75 80

Tyr Val Cys Asn Val Val His Glu Pro Ser Asn Thr Lys Val Asp Lys  
 85 90 95

Arg Val Gly Leu Pro Cys Arg Ser Thr Cys Pro Pro Cys Pro Ala Glu  
 100 105 110

Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp  
 115 120 125

Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp  
 130 135 140

Val Ser Gln Glu Glu Pro Asp Val Lys Phe Asn Trp Tyr Val Asp Gly  
 145 150 155 160

Val Glu Val His Asn Ala Gln Thr Lys Pro Arg Glu Glu Gln Phe Asn  
 165 170 175

Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Thr His Gln Asp Trp  
 180 185 190

Leu Asn Gly Lys Glu Tyr Thr Cys Lys Val Ser Asn Lys Gly Leu Pro  
 195 200 205

Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu  
210 215 220

Pro Gln Val Tyr Ile Leu Pro Pro Pro Gln Glu Glu Leu Thr Lys Asn  
225 230 235 240

Gln Val Ser Leu Thr Cys Leu Val Thr Gly Phe Tyr Pro Ser Asp Ile  
245 250 255

Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Thr Tyr Lys Thr  
260 265 270

Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Leu Tyr Ser Lys  
275 280 285

Leu Ile Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Thr Phe Ser Cys  
290 295 300

Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu  
305 310 315 320

Ser Val Ser Pro Gly Lys  
325

<210> 23  
<211> 996  
<212> DNA  
<213> *Macaca fascicularis*

<400> 23  
gcctccacca agggcccatc ggtcttcccc ctggcgccct cctccaggag cacctccgag 60  
agcacagcgg ccctgggctg cctgggtcaag gactacttcc ctgaaccctg gaccgtgtcg 120  
tggaactcag gtcctctgac cagcggcggtg cacaccttcc cggctgtcct acagtcctca 180  
gggctctact ccctcagcag cgtgggtgacc gtgcctcca gcagcttggg caccagacc 240  
tacgtctgca acgtaaacca caagcccagc aacaccaagg tggacaagag agttgagata 300  
acatgtgggtg gtggcagcaa acctcccacg tgcccaccgt gcccagcacc tgaactcctg 360  
gggggaccgt cagtcttctt cttcccccca aaacccaagg acaccctcat gatctcccg 420  
accctgagg tcacgtgcgt ggtggtagac gtgagccagg aagacccga tgtcaagttc 480  
aactggtacg taaatggcgc ggaggtgcat catgcccaga cgaagccacg ggagacgcag 540  
tacaacagca catatcgtgt ggtcagcgtc ctcaccgtca cgcaccagga ctggctgaac 600  
ggcaaggagt acacgtgcaa ggtctccaac aaagccctcc cggcccccat ccagaaaacc 660

atctccaaag acaaagggca gccccgagag cctcaggtgt acaccctgcc cccgtcccgg 720  
 gaggagctga ccaagaacca ggtcagcctg acctgcctgg tcaaaggctt ctaccccagc 780  
 gacatcgctg tggagtggga gagcagcggg cagccggaga acacctataa gaccaccccg 840  
 cccgtgctgg actccgacgg ctctacttc ctctacagca agctcacctg ggacaagagc 900  
 aggtggcagc aggggaacgt cttctcatgc tccgtgatgc atgaggctct gcacaaccac 960  
 tacaccaga agagcctctc cctgtctccg ggtaaa 996

<210> 24  
 <211> 332  
 <212> PRT  
 <213> Macaca fascicularis

<400> 24

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Arg  
 1 5 10 15

Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr  
 20 25 30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ser Leu Thr Ser  
 35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
 50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr  
 65 70 75 80

Tyr Val Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys  
 85 90 95

Arg Val Glu Ile Thr Cys Gly Gly Gly Ser Lys Pro Pro Thr Cys Pro  
 100 105 110

Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe  
 115 120 125

Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val  
 130 135 140

Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Asp Val Lys Phe  
 145 150 155 160

Asn Trp Tyr Val Asn Gly Ala Glu Val His His Ala Gln Thr Lys Pro  
165 170 175

Arg Glu Thr Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr  
180 185 190

Val Thr His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Thr Cys Lys Val  
195 200 205

Ser Asn Lys Ala Leu Pro Ala Pro Ile Gln Lys Thr Ile Ser Lys Asp  
210 215 220

Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg  
225 230 235 240

Glu Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly  
245 250 255

Phe Tyr Pro Ser Asp Ile Val Val Glu Trp Glu Ser Ser Gly Gln Pro  
260 265 270

Glu Asn Thr Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser  
275 280 285

Tyr Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln  
290 295 300

Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His  
305 310 315 320

Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
325 330

<210> 25

<211> 999

<212> DNA

<213> Macaca fascicularis

<400> 25

gcctccacca agggcccatc ggtcttcccc ctggcgccct cctccaggag cacctccgag 60

agcacagcgg ccctgggctg cctgggtcaag gactacttcc ctgaaccggt gaccgtgtcg 120

tggaactcag gcgccctgac cagcggcggtg cacaccttcc cggctgtcct acagtctca 180

gggctctact ccctcagcag cgtgggtgacc gtgccctcca gcagcttggg caccagagacc 240

tacgtctgca acgtaaacca caagcccagc aacaccaagg tggacaagag agttgagata 300

aaaacatgtg gtggtggcag caaacctccc acgtgcccac cgtgcccagc acctgaactc 360

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ctgggggggac cgtcagtctt cctcttcccc ccaaaaccca aggacaccct catgatctcc 420
cggaacccctg aggtcacatg cgtgggtggtg gacgtgagcc aggaagaccc cgaggtccag 480
ttcaactggt acgtaaacgg cgcggagggtg catcatgccc agacgaagcc acgggagacg 540
cagtacaaca gcacgtaccg cgtgggtcagc gtccctcaccg tcacacacca ggactggctg 600
aacggcaagg agtacacgtg caaggtctcc aacaaagccc tcccggcccc catccagaaa 660
accatctcca aagacaaagg gcagccccga gagcctcagg tgtacaccct gcccccgctc 720
cgggaggagc tgaccaagaa ccaggtcagc ctgacctgcc tgggtcaaagg cttctacccc 780
agcgacatcg tcgtggagtg ggagagcagc gggcagccgg agaacaccta caagaccacc 840
ccgcccgtgc tggactccga cggctcctac ttctctaca gcaagctcac cgtggacaag 900
agcaggtggc agcaggggaa cgtcttctca tgctccgtga tgcattgaggc tctgcacaac 960
cactacaccc agaagagcct ctccctgtct ccgggtaaa 999

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<210> 26  
 <211> 333  
 <212> PRT  
 <213> Macaca fascicularis

<400> 26

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Arg  
 1 5 10 15

Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr  
 20 25 30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser  
 35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
 50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr  
 65 70 75 80

Tyr Val Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys  
 85 90 95

Arg Val Glu Ile Lys Thr Cys Gly Gly Gly Ser Lys Pro Pro Thr Cys  
 100 105 110

Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu  
 115 120 125

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu  
 130 135 140

Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln  
 145 150 155 160

Phe Asn Trp Tyr Val Asn Gly Ala Glu Val His His Ala Gln Thr Lys  
 165 170 175

Pro Arg Glu Thr Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu  
 180 185 190

Thr Val Thr His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Thr Cys Lys  
 195 200 205

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Gln Lys Thr Ile Ser Lys  
 210 215 220

Asp Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser  
 225 230 235 240

Arg Glu Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys  
 245 250 255

Gly Phe Tyr Pro Ser Asp Ile Val Val Glu Trp Glu Ser Ser Gly Gln  
 260 265 270

Pro Glu Asn Thr Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly  
 275 280 285

Ser Tyr Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln  
 290 295 300

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn  
 305 310 315 320

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
 325 330

<210> 27

<211> 999

<212> DNA

<213> *Macaca fascicularis*

<400> 27

gcctccacca agggcccatc ggtcttcccc ctggcgccct cctccaggag cacctccgag

60

agcacagcgg ccctgggctg cctgggtcaag gactacttcc ctgaaccctg gaccgtgtcg. 120  
 tggaactcag gcgccctgac cagcggcggtg cacaccttcc cggctgtcct acagtctctca 180  
 gggctctact ccctcagcag cgtgggtgacc gtgccctcca gcagcttggg caccagacc 240  
 tacgtctgca acgtaaacca caagcccagc aacaccaagg tggacaagag agttgagata 300  
 aaaacatgtg gtgggtggcag caaacctccc acgtgcccac cgtgcccagc acctgaactc 360  
 ctgggggggac cgtcagtctt cctcttcccc ccaaaaccca aggacaccct catgatctcc 420  
 cggacccttg aggtcacatg cgtgggtggtg gacgtgagcc aggaagaccc cgaggccag 480  
 ttcaactggt acgtaaacgg cgcggagggtg catcatgccc agacgaagcc acgggagacg 540  
 cagtacaaca gcacgtaccg cgtgggtcagc gtcctcaccg tcacacacca ggactggctg 600  
 aacggcaagg agtacacgtg caaggtctcc aacaaagccc tcccggcccc catccagaaa 660  
 accatctcca aagacaaagg gcagccccga gagcctcagg tgtacaccct gcccccgctc 720  
 cgggaggagc tgaccaagaa ccaggtcagc ctgacctgcc tgggtcaaagg cttctacccc 780  
 agcgacatcg tcgtggagtg ggagagcagc gggcagccgg agaacaccta caagaccacc 840  
 ccgcccgtgc tggactccga cggctcctac ttctctaca gcaagctcac cgtggacaag 900  
 agcaggtggc agcaggggaa cgtcttctca tgctccgtga tgcagagggc tctgcacaac 960  
 cactacaccc agaagagcct ctccctgtct cggggtaaa 999

<210> 28

<211> 333

<212> PRT

<213> *Macaca fascicularis*

<400> 28

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Arg  
 1 5 10 15

Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr  
 20 25 30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser  
 35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
 50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr  
 65 70 75 80



Tyr Val Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys  
 85 90 95

Arg Val Glu Ile Lys Thr Cys Gly Gly Gly Ser Lys Pro Pro Thr Cys  
 100 105 110

Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu  
 115 120 125

Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu  
 130 135 140

Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp Pro Glu Val Gln  
 145 150 155 160

Phe Asn Trp Tyr Val Asn Gly Ala Glu Val His His Ala Gln Thr Lys  
 165 170 175

Pro Arg Glu Thr Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu  
 180 185 190

Thr Val Thr His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Thr Cys Lys  
 195 200 205

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Gln Lys Thr Ile Ser Lys  
 210 215 220

Asp Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser  
 225 230 235 240

Arg Glu Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys  
 245 250 255

Gly Phe Tyr Pro Ser Asp Ile Val Val Glu Trp Glu Ser Ser Gly Gln  
 260 265 270

Pro Glu Asn Thr Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly  
 275 280 285

Ser Tyr Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln  
 290 295 300

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn  
 305 310 315 320

His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys.  
 325 330

<210> 29  
 <211> 324  
 <212> DNA  
 <213> *Macaca fascicularis*

<400> 29  
 cgcgctgtgg ctgcaccatc tgtcttcac ttcccgccat ctgaggatca ggtgaaatct 60  
 ggaactgtct ctgttgtgtg cctgctgaat aacttctatc ccagagaggc cagcgtaaag 120  
 tggaagggtg atggtgtcct caaaacgggt aactcccagg agagtgtcac agagcaggac 180  
 agcaaggaca acacctacag cctgagcagc accctgacgc tgagcagcac agactaccag 240  
 agtcacaatg tctatgcctg cgaagtcacc catcagggcc tgagctcgcc cgtcaccaag 300  
 agcttcaaca gaggagagtg ttag 324

<210> 30  
 <211> 107  
 <212> PRT  
 <213> *Macaca fascicularis*

<400> 30

Arg Ala Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro Ser Glu Asp  
 1 5 10 15

Gln Val Lys Ser Gly Thr Val Ser Val Val Cys Leu Leu Asn Asn Phe  
 20 25 30

Tyr Pro Arg Glu Ala Ser Val Lys Trp Lys Val Asp Gly Val Leu Lys  
 35 40 45

Thr Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser Lys Asp Asn  
 50 55 60

Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Ser Thr Asp Tyr Gln  
 65 70 75 80

Ser His Asn Val Tyr Ala Cys Glu Val Thr His Gln Gly Leu Ser Ser  
 85 90 95

Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys  
 100 105

<210> 31  
 <211> 20  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 31

gcctccacca agggccctcg

20

<210> 32

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 32

tttaccgga gacagggaga g

21

<210> 33

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 33

gcctccacca agggccctcg

20

<210> 34

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 34

tttaccgga gacagggaga g

21

<210> 35

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 35

gtcacatggc accacctctc t

21

<210> 36

<211> 21

<212> DNA

<213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 36

ggtacgtgcc aagcatcctc g

21

&lt;210&gt; 37

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 37

ctggcgctcct gctccaggag c

21

&lt;210&gt; 38

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 38

gctcctggag caggacgcca g

21

&lt;210&gt; 39

&lt;211&gt; 26

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 39

gctagcacca agggcccatc ggtctt

26

&lt;210&gt; 40

&lt;211&gt; 25

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer

&lt;400&gt; 40

aactgtcttg tcgaccttgg tgttg

25

&lt;210&gt; 41

&lt;211&gt; 25

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

<220>  
<223> Primer

<400> 41  
caacaccaag gtcgacaaga gagtt 25

<210> 42  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer

<400> 42  
gcggccgctc atttaccgg agacacggag 30

<210> 43  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer

<400> 43  
cgtctctagt gcctccacca agggcccatc 30

<210> 44  
<211> 34  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer

<400> 44  
gcatgtcgac tcatttacc ggagacaggg agag 34

<210> 45  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer

<400> 45  
atcaaacgag ctgtggctgc acca 24

<210> 46  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Primer

<400> 46

caggtggggg cacttctccc t

21

<210> 47

<211> 345

<212> DNA

<213> Artificial Sequence

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 47

gaggttcagc tgggtgcagtc tgggggaggc ttggtacatc ctgggggggtc cctgagactc 60

tcctgtgcag gctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120

ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aaactatgca 180

gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240

caaatgaaca gcctgagagc cgaggacatg gctgtgtatt actgtgcaag agggaggtac 300

tactttgact actggggcca gggaaccctg gtcaccgtct cctca 345

<210> 48

<211> 345

<212> DNA

<213> Artificial Sequence

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 48

gaggttcagc tgggtgcagtc tgggggaggc ttggtacatc ctgggggggtc cctgagactc 60

tcctgtgcag gctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120

ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aagctatgca 180

gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240

caaatgaaca gcctgagtgc cgaggacatg gctgtgtatt actgtgcaag agggaggtac 300

tacttcaccc actggggcca gggaaccctg gtcaccgtct cctca 345

<210> 49

<211> 347

<212> DNA

<213> Artificial Sequence

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 49

gaggttcagc tgggtgcagtc tgggggaggc ttggtacatc ctgggggggtc cctgagactc 60

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tcctgtgcag gctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120
ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aagctatgca 180
gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240
caaatgaaca gcctgagagc cgaggacatg gctgtgtatt actgtgcaag agggaggtac 300
tggtacaaca actggggcca gggaaccctg gtcaccgtct cctcaca 347

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<210> 50  
 <211> 345  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

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<400> 50
gaggttcagt tgggtgcagtc tgggggaggc ttggtacatc ctgggggggtc cctgagactc 60
tcctgtgcag gctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120
ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aaactatgca 180
gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240
caaatgaaca gcctgagagc cgaggacatg gctgtgtatt actgtgcaag agggaggtac 300
tacttcccg tggggggcca gggaaccctg gtcaccgtct cctca 345

```

<210> 51  
 <211> 345  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

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<400> 51
gaggttcagc tgggtgcagtc tgggggaggc ttggtacatc ctgggggggtc cctgagactc 60
tcctgtgcag gctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120
ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aaactatgca 180
gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240
caaatgaaca gcctgagagc cgaggacatg gctgtgtatt actgtgcaag agggaggtac 300
tacttcacga ggtggggcca gggaaccctg gtcaccgtct cctca 345

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<210> 52  
 <211> 345  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 52  
gaggttcagt tgggtgcagtc tgggggagggc ttggtacatc ctgggggggtc cctgagactc 60  
tcctgtgcag gctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120  
ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aaactatgca 180  
gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240  
caaatgaaca gcctgagagc cgaggacatg gctgtgtatt actgtgcaag agggaggtac 300  
tggtaccctg ggtggggcca gggaaccctg gtcaccgtct cctca 345

<210> 53

<211> 345

<212> DNA

<213> Artificial Sequence

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 53  
gaggttcagc tgggtgcagtc tgggggagggc ttggtacatc ctgggggggtc cctgagactc 60  
tcctgtgcag gctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120  
ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aagctatgca 180  
gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240  
caaatgaaca gcctgagagc cgaggacatg gctgtgtatt actgtgcaag agggaggtac 300  
tggtaccctg ggtggggcca gggaaccctg gtcaccgtct cctca 345

<210> 54

<211> 345

<212> DNA

<213> Artificial Sequence;

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 54  
gaggttcagt tgggtgcagtc tgggggagggc ttggtacatc ctgggggggtc cctgagactc 60  
tcctgtgcag gctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120  
ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aaactatgca 180  
gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240  
caaatgaaca gcctgagagc cgaggacatg gctgtgtatt actgtgcaag agggaggtac 300  
tggttcccgt ggtggggcca gggaaccctg gtcaccgtct cctca 345

<210> 55



<211> 345  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 55  
 gaggttcagc tgggtgcagtc tgggggaggc ttggtacatc ctgggggggc cctgagactc 60  
 tcctgtgcag gctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120  
 ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aagctatgca 180  
 gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240  
 caaatgaaca gcctgagagc cgaggacatg gctgtgtatt actgtgcaag agggaggtac 300  
 tggttcccgt ggtggggcca gggaaccctg gtcaccgtct cctca 345

<210> 56  
 <211> 345  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 56  
 gaggttcagt tgggtgcagtc tgggggaggc ttggtacatc ctgggggggc cctgagactc 60  
 tcctgtgcag gctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120  
 ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aaactatgca 180  
 gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240  
 caaatgaaca gcctgagagc cgaggacatg gctgtgtatt actgtgcaag agggaggtac 300  
 tggtaaccgt ggtggggcca gggaaccctg gtcaccgtct cctca 345

<210> 57  
 <211> 345  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 57  
 gaggttcagc tgggtgcagtc tgggggaggc ttggtacatc ctgggggggc cctgagactc 60  
 tcctgtgcag gctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120  
 ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aagctatgca 180  
 gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240  
 caaatgaaca gcctgagagc cgaggacatg gctgtgtatt actgtgcaag agggaggtac 300

tggtaccctg ggtggggcca gggaaccctg gtcaccgtct cctca 345

<210> 58  
 <211> 345  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 58  
 gaggttcagc tgggtgcagtc tgggggaggc ttggtacatc ctgggggggc cctgagactc 60  
 tcctgtgcag gctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120  
 ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aagctatgca 180  
 gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240  
 caaatgaaca gcctgagagc cgaggacatg gctgtgtatt actgtgcaag agggaggtac 300  
 tacttcccgt ggtggggcca gggaaccctg gtcaccgtct cctca 345

<210> 59  
 <211> 345  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 59  
 gaggttcagc tgggtgcagtc tgggggaggc ttggtacatc ctgggggggc cctgagactc 60  
 tcctgtgcag gctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120  
 ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aagctatgca 180  
 gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240  
 caaatgaaca gcctgagtg gcaggacatg gctgtgtatt actgtgcaag agggaggtac 300  
 tacttcccgt ggtggggcca gggaaccctg gtcaccgtct cctca 345

<210> 60  
 <211> 345  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 60  
 gaggttcagt tgggtggagtc tgggggaggc ttggtacagc ctgggggggc cctgagactc 60  
 tcctgtgcag cctctggatt caccttcagt agaaatgcta tgttctgggt tcgccaggct 120

ccaggaaaag gtctggagtg ggtatcaggt attggtactg gtggtgccac aagctatgca 180  
 gactccgtga agggccgatt caccatctcc agagacaatg ccaagaactc cttgtatctt 240  
 caaatgaaca gcctgagagc cgaggacacg gctgtgtatt actgtgcaag agggaggtac 300  
 tacttcccgt ggtggggcca gggaaccctg gtcaccgtct cctca 345

<210> 61  
 <211> 115  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R  
 <400> 61

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly  
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Arg Asn  
 20 25 30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45

Ser Gly Ile Gly Thr Gly Gly Ala Thr Asn Tyr Ala Asp Ser Val Lys  
 50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
 65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
 85 90 95

Arg Gly Arg Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr  
 100 105 110

Val Ser Ser  
 115

<210> 62  
 <211> 115  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R  
 <400> 62

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Arg Asn  
20 25 30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Gly Thr Gly Gly Ala Thr Ser Tyr Ala Asp Ser Val Lys  
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
65 70 75 80

Gln Met Asn Ser Leu Ser Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
85 90 95

Arg Gly Arg Tyr Tyr Phe Thr His Trp Gly Gln Gly Thr Leu Val Thr  
100 105 110

Val Ser Ser  
115

<210> 63  
<211> 115  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 63

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Arg Asn  
20 25 30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Gly Thr Gly Gly Ala Thr Ser Tyr Ala Asp Ser Val Lys  
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
                     85                    90                    95

Arg Gly Arg Tyr Trp Tyr Asn Asn Trp Gly Gln Gly Thr Leu Val Thr  
                     100                    105                    110

Val Ser Ser  
                     115

<210> 64  
 <211> 115  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 64

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly  
 1                    5                    10                    15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Arg Asn  
                     20                    25                    30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
                     35                    40                    45

Ser Gly Ile Gly Thr Gly Gly Ala Thr Asn Tyr Ala Asp Ser Val Lys  
                     50                    55                    60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
 65                    70                    75                    80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
                     85                    90                    95

Arg Gly Arg Tyr Tyr Phe Pro Trp Trp Gly Gln Gly Thr Leu Val Thr  
                     100                    105                    110

Val Ser Ser  
                     115

<210> 65  
 <211> 115  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 65

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Arg Asn  
20 25 30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Gly Thr Gly Gly Ala Thr Asn Tyr Ala Asp Ser Val Lys  
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
85 90 95

Arg Gly Arg Tyr Tyr Phe Thr Arg Trp Gly Gln Gly Thr Leu Val Thr  
100 105 110

Val Ser Ser  
115

<210> 66

<211> 114

<212> PRT

<213> Artificial Sequence

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 66

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Arg Asn  
20 25 30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Gly Thr Gly Gly Ala Thr Asn Tyr Ala Asp Ser Val Lys  
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
 65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
 85 90 95

Arg Gly Arg Tyr Trp Tyr Pro Trp Trp Gly Gln Gly Thr Leu Val Thr  
 100 105 110

Val Ser

<210> 67

<211> 115

<212> PRT

<213> Artificial Sequence

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 67

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly  
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Arg Asn  
 20 25 30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45

Ser Gly Ile Gly Thr Gly Gly Ala Thr Ser Tyr Ala Asp Ser Val Lys  
 50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
 65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
 85 90 95

Arg Gly Arg Tyr Trp Tyr Pro Trp Trp Gly Gln Gly Thr Leu Val Thr  
 100 105 110

Val Ser Ser  
 115

<210> 68

<211> 115

<212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 68

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly  
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Arg Asn  
 20 25 30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45

Ser Gly Ile Gly Thr Gly Gly Ala Thr Asn Tyr Ala Asp Ser Val Lys  
 50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
 65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
 85 90 95

Arg Gly Arg Tyr Trp Phe Pro Trp Trp Gly Gln Gly Thr Leu Val Thr  
 100 105 110

Val Ser Ser  
 115

<210> 69  
 <211> 115  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 69

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly  
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Arg Asn  
 20 25 30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45



Ser Gly Ile Gly Thr Gly Gly Ala Thr Ser Tyr Ala Asp Ser Val Lys  
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
85 90 95

Arg Gly Arg Tyr Trp Phe Pro Trp Trp Gly Gln Gly Thr Leu Val Thr  
100 105 110

Val Ser Ser  
115

<210> 70

<211> 115

<212> PRT

<213> Artificial Sequence

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 70

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Arg Asn  
20 25 30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Gly Thr Gly Gly Ala Thr Asn Tyr Ala Asp Ser Val Lys  
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
85 90 95

Arg Gly Arg Tyr Trp Tyr Pro Trp Trp Gly Gln Gly Thr Leu Val Thr  
100 105 110

Val Ser Ser  
115

<210> 71  
 <211> 115  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R  
 <400> 71

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly  
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Arg Asn  
 20 25 30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45

Ser Gly Ile Gly Thr Gly Gly Ala Thr Ser Tyr Ala Asp Ser Val Lys  
 50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
 65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
 85 90 95

Arg Gly Arg Tyr Trp Tyr Pro Trp Trp Gly Gln Gly Thr Leu Val Thr  
 100 105 110

Val Ser Ser  
 115

<210> 72  
 <211> 115  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R  
 <400> 72

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly  
 1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Arg Asn  
 20 25 30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Gly Thr Gly Gly Ala Thr Ser Tyr Ala Asp Ser Val Lys  
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
85 90 95

Arg Gly Arg Tyr Tyr Phe Pro Trp Trp Gly Gln Gly Thr Leu Val Thr  
100 105 110

Val Ser Ser  
115

<210> 73  
<211> 115  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 73

Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His Pro Gly Gly  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Gly Ser Gly Phe Thr Phe Ser Arg Asn  
20 25 30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Gly Thr Gly Gly Ala Thr Ser Tyr Ala Asp Ser Val Lys  
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
65 70 75 80

Gln Met Asn Ser Leu Ser Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
85 90 95

Arg Gly Arg Tyr Tyr Phe Pro Trp Trp Gly Gln Gly Thr Leu Val Thr  
100 105 110

Val Ser Ser  
115

<210> 74  
<211> 115  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 74

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly  
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Asn  
20 25 30

Ala Met Phe Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ser Gly Ile Gly Thr Gly Gly Ala Thr Ser Tyr Ala Asp Ser Val Lys  
50 55 60

Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr Leu  
65 70 75 80

Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala  
85 90 95

Arg Gly Arg Tyr Tyr Phe Pro Trp Trp Gly Gln Gly Thr Leu Val Thr  
100 105 110

Val Ser Ser  
115

<210> 75  
<211> 327  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 75  
gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60  
ctctcctgca gggccagtca gagtgttagc agcagctact tagcctggta ccagcagaaa 120

cctggccagg ctcccaggct cctcatcttt ggtgcatcca gcagggccac tggcatccca 180  
 gacagggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240  
 cctgaagatt ttgcagtgta ttactgtcag cagtatggta gctcacctcc gtggacgttc 300  
 ggccaaggga ccaaggtgga aatcaaa 327

<210> 76  
 <211> 327  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 76  
 gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60  
 ctctcctgca gggccagtca gagtgtagc aacagctact tagcctggta ccagcagaaa 120  
 cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggcccc tggcatccca 180  
 gacagggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240  
 cctgaagatt ttgcagtgta ttactgtcag cagtatgata actcagcagg gtggacgttc 300  
 ggccaaggga ccaaggtgga gatcaaa 327

<210> 77  
 <211> 327  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 77  
 gaaattgtgt tgacgcagtc tccaggcacc ctgtctttgt ctccggggga aagagccacc 60  
 ctctcctgca gggccagtca gactgttaac agcgactact tagcctggta ccagcagaaa 120  
 ccggggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatccca 180  
 gacagggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcag cagactggag 240  
 cctgaagatt ttgcagtcta ttactgtcag cagtatggta gggtcacctcc gtggacgttc 300  
 ggccaaggga ccaaagtgga tatcaaa 327

<210> 78  
 <211> 327  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 78  
 gaaattgtga tgacgcagtc tccaggcacc ctgtctttgt ctccagggga aagagccacc 60  
 ctctcctgca gggccagtca gagtgttagc agcgactact tagcctggta ccagcagaaa 120  
 cctggccagg ctcccaggct cctcatctat ggtgcatcta gcagggcctc tggcatccca 180  
 gacaggttca gtggcagtgg gtttgggaca gacttcactc tcaccatcag cagactggag 240  
 cctgaagatt ttgcaatata ttactgtcag cagtatggta gctcacctcc gtggacgttc 300  
 ggccaaggga ccaaggtgga aatcaaa 327

<210> 79  
 <211> 327  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 79  
 gatattgtgc tgaccagtc tccagccacc ctgtctttgt ctccagggga aagagccacc 60  
 ctctcctgca gggccagtca gagtgttaac agcaactact tagcctggta ccagcagaaa 120  
 cctggccagg ctcccaggct cctcatctat ggtacatcct acagggccac tggcatccca 180  
 gacaggttca gtggcagtgg gtctgggaca gacttcactc tcaccatcac cagactggag 240  
 cctgaagatt ttgcagtgtg ttactgtcag cagtatggta gctcaccacc gtggacgttc 300  
 ggccaaggga cacgactgga gattaata 327

<210> 80  
 <211> 327  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 80  
 gatattgtgc tgacgcagac tccagccacc ctgtctttgt ctccagggga aagagccacc 60  
 ctctcctgca gggccagtca gagtgttggc agcagctact tagcctggta ccagcagaga 120  
 cctggccagg ctcccaggct cctcatctat ggtgcatcca gcagggccac tggcatcccg 180  
 gacaggttca gtggcagtgg gtctgggaca gacttcactc tcacgatcag cagactggag 240  
 cctgaagatt ttgcagtgtg ttattgtcag cagtatggaa gttcacctcc gtggatgttc 300  
 ggccaaggga ccaaggtgga gatcaaa 327

<210> 81  
 <211> 109  
 <212> PRT

<213> Artificial Sequence

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 81

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly  
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser  
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu  
35 40 45

Ile Phe Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser  
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu  
65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro  
85 90 95

Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  
100 105

<210> 82

<211> 109

<212> PRT

<213> Artificial Sequence

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 82

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly  
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Asn Ser  
20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu  
35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Pro Gly Ile Pro Asp Arg Phe Ser  
50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu  
 65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Asp His Ser Ala  
 85 90 95

Gly Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  
 100 105

<210> 83  
 <211> 109  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 83

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly  
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Thr Val Asn Ser Asp  
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu  
 35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser  
 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu  
 65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Arg Ser Pro  
 85 90 95

Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Asp Ile Lys  
 100 105

<210> 84  
 <211> 109  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Antibody variable domain sequences that recognize anti IL-4R

<400> 84



Glu Ile Val Met Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly  
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Asp  
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu  
 35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Ser Gly Ile Pro Asp Arg Phe Ser  
 50 55 60

Gly Ser Gly Phe Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu  
 65 70 75 80

Pro Glu Asp Phe Ala Ile Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro  
 85 90 95

Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  
 100 105

<210> 85

<211> 109

<212> PRT

<213> Artificial Sequence

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 85

Asp Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly  
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Asn Ser Asn  
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu  
 35 40 45

Ile Tyr Gly Thr Ser Tyr Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser  
 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Thr Arg Leu Glu  
 65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro  
 85 90 95

Pro Trp Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys  
 100 105

<210> 86

<211> 109

<212> PRT

<213> Artificial Sequence

<220>

<223> Antibody variable domain sequences that recognize anti IL-4R

<400> 86

Asp Ile Val Leu Thr Gln Thr Pro Ala Thr Leu Ser Leu Ser Pro Gly  
 1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Gly Ser Ser  
 20 25 30

Tyr Leu Ala Trp Tyr Gln Gln Arg Pro Gly Gln Ala Pro Arg Leu Leu  
 35 40 45

Ile Tyr Gly Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser  
 50 55 60

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu  
 65 70 75 80

Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Tyr Gly Ser Ser Pro  
 85 90 95

Pro Trp Met Phe Gly Gln Gly Thr Lys Val Glu Ile Lys  
 100 105